

Appln No. 09/995,483
Amdt date October 1, 2010
Reply to Office action of June 1, 2010

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please cancel claims 3 and 34, amend claims 1, 4, 22, 27 and 115, and add claims 116-118 as follows:

1. (Thrice Amended) A bottle cap for capping a bottle having a mouth having a rim wherein a radius extends from a center of the mouth to an outer perimeter of the rim, the cap comprising:

a top portion having an inner surface;

an annular wall extending from the top portion;

a plurality of concentric circular ridges formed on the top portion inner surface for engaging [registering with] the rim along the radius; and

at least a slot formed across each of said plurality of ridges for defining a pathway across the rim when the concentric circular ridges are engaged with the rim, wherein each a slot in each ridge is radially aligned with a slot in a consecutive ridge for defining a single radial slot across said consecutive ridges.

2. (Canceled)

3. (Canceled)

4. (Amended) A bottle cap as recited in claim 1 wherein [the] a slot formed across one ridge is circumferentially spaced apart from a slot formed across an adjacent ridge.

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5. (Original) A bottle cap as recited in claim 1 further comprising a liner fitted over the top portion inner surface, the liner having an opening formed through the liner thickness.

6. (Original) A bottle cap as recited in claim 1 wherein the top portion is hingedly coupled to the annular wall.

7. (Original) A bottle cap as recited in claim 1 further comprising a moveable spout extending from the top portion.

8-9. (Canceled)

10. (Original) A bottle cap comprising:
a top portion having an inner surface;
an annular wall extending from the top portion;
a first set of parallel spaced apart grooves formed on the inner surface of the top portion;
and

a second set of parallel spaced apart grooves formed on the inner surface of the top portion, wherein grooves of the first set intersect grooves of the second set.

11-13. (Canceled)

14. (Thrice Amended) A vented bottle cap system comprising:
a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface;
wherein a radius extends from a center of said mouth to an outer perimeter of said rim;
a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the

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threads formed on the bottle neck, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a plurality of concentric circular ridges formed on the inner surface of the top portion; and

a slot formed across each of said plurality of ridges, wherein when the cap is completely threaded onto the bottle neck, each of the plurality of ridges engages [sit on] the bottle neck rim, wherein the bottle neck rim is engaged by all of said plurality of ridges along a majority of a circumferential length of the bottle neck rim, and wherein the slots define a pathway for gas generated in the bottle to escape across the bottle neck rim and through the pathway, wherein said majority of a circumferential length may be a non-continuous circumferential length.

15. (Original) A vented bottle cap system as recited in claim 14 wherein a slot in each ridge is radially aligned with a slot in an adjacent ridge.

16. (Original) A vented bottle cap system as recited in claim 14 wherein a slot in each ridge is circumferentially spaced apart from a slot in an adjacent ridge.

17. (Original) A vented bottle cap system as recited in claim 14 further comprising a liner fitted in the cap and having a hole through its thickness, wherein when the cap is threaded onto the bottle neck, the liner sits on the bottle neck rim and wherein gases generated in the bottle escape through the hole, through the slot and through the pathway.

18. (Five Times Amended) A vented bottle cap system comprising:
a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface;
a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the

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threads formed on the bottle neck, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall; and

a [groove formed on the inner surface of the top portion extending from a first groove end to a second groove end, wherein when the cap is threaded onto the bottle neck, the groove first end is external of the rim and the groove second end is external of the rim of the bottle neck] first set of parallel grooves and a second set of parallel grooves formed on an inner surface of the top portion, wherein grooves of the first set intersect grooves of the second set providing a pathway for gas generated in the bottle to escape across the bottle neck mouth and through the gas path.

19-21. (Canceled)

22. (Four Times Amended) A method for venting gases generated in a bottle having a rim defining a mouth and containing a liquid, wherein a radius extends from a center of said mouth to an outer perimeter of said rim, the method comprising:

providing a cap having a top portion, a plurality of circular ridges formed on an inner surface of the top portion and a slot formed across each of said plurality of ridges; and

torquing the cap on the bottle causing the plurality of ridges to [sit on] engage and press against an upper surface of the rim, wherein all of said plurality of ridges engage the upper surface of the rim along a majority of a circumferential length of the upper surface of the rim, wherein the plurality of slots provide a pathway for the venting of gases, and wherein said majority of a circumferential length may not be continuous.

23. (Amended) A method as recited in claim 22 further comprising [the steps of]:
venting gas in the bottle through at least one of the slots;
forcing liquid in the slot after venting; and
solidifying the liquid to block the pathway through at least one of said slots.

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24-26. (Canceled)

27. (Four Times Amended) A vented bottle cap system [as recited in claim 26] comprising:

a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface, wherein a radius extends from a center of the mouth to an outer perimeter of the rim;

a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a disc made of a material being at least semi-hard fitted over the top portion inner surface, the disc having a first surface opposite a second surface, wherein the first surface faces the top portion inner surface; and

a plurality of concentric ridges formed [in] on the second surface of the disc, wherein when the cap is completely threaded onto the bottle neck, the plurality of ridges contact the bottle neck rim, wherein the bottle neck rim is contacted by all of said plurality of concentric ridges along a majority of a circumferential length of said rim, and wherein a majority of the circumferential length may not be continuous; and

at least a slot in each ridge.

28. (Original) A vented bottle cap system as recited in claim 27 wherein at least a slot in each ridge is radially aligned with a slot in an adjacent ridge.

29. (Canceled)

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30. (Amended) A vented bottle cap system as recited in claim [26] 27 wherein the disc is made from plastic.

31. (Amended) A vented bottle cap system comprising:

a bottle having a neck having a rim defining a mouth and having threads formed on the bottle neck outer surface;

a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck outer surface, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a disc made of a material being at least [semi hard] semi-hard fitted over the top portion inner surface, the disc having a first surface opposite a second surface, wherein the first surface faces the top portion inner surface; and

a first set of parallel grooves and a second set of parallel grooves formed on the second surface of the disc, wherein grooves of the first set intersect grooves of the second set,

wherein when the cap is threaded onto the bottle neck, the grooves extend radially beyond the rim of the bottle neck providing pathways for gas generated in the bottle to escape across the bottle neck mouth.

32-33. (Canceled)

34. (Canceled)

35-114. (Canceled)

115. (New) A bottle cap as recited in claim 1 wherein said cap top portion inner surface is a surface of an insert inserted against the cap top portion.

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116. (New) A bottle cap as recited in claim 14 wherein said cap top portion inner surface is a surface of an insert inserted against the cap top portion.

117. (New) A vented bottle cap system comprising:
a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface;

wherein a radius extends from a center of said mouth to an outer perimeter of said rim;
a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck, wherein when the cap is threaded onto the bottle neck a gas path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a plurality of concentric circular ridges formed on the inner surface of the top portion; and

a slot formed across each of said plurality of ridges, wherein when the cap is completely threaded onto the bottle neck, the plurality of ridges engage the bottle neck along said radius and the slots define a pathway for gas generated in the bottle to escape across the bottle neck rim and through the pathway, wherein a slot in each ridge is radially aligned with a slot in an adjacent ridge.

118. (New) A vented bottle cap system comprising:
a bottle having a neck having a rim defining a mouth and threads formed on the neck outer surface, wherein a radius extends from a center of the mouth to an outer perimeter of the rim;
a cap having a top portion having an inner surface and an annular wall extending from the top portion, the annular wall having threads formed on its inner surface for threading onto the threads formed on the bottle neck, wherein when the cap is threaded onto the bottle neck a gas

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path is formed between the outer surface of the bottle neck and the inner surface of the annular wall;

a disc made of a material being at least semi-hard fitted over the top portion inner surface, the disc having a first surface opposite a second surface, wherein the first surface faces the top portion inner surface; and

a plurality of concentric ridges formed on the second surface of the disc, wherein when the cap is completely threaded onto the bottle neck, the plurality of ridges contact the bottle neck rim and along the radius; and

at least a slot in each ridge, wherein at least a slot in each ridge is radially aligned with a slot in an adjacent ridge.